

# Behavioral Science and Medical Education: The Role of Reflective Exercises in Developing Medical Professionalism

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## Abstract

Although the behavioral sciences have been largely incorporated into medical education, limitations and restrictions persist. It is the goal of this paper to dispel some of the arguments against the value of behavioral science in medical education by studying the effects of reflective programs (i.e. Balint groups and medical retreats) on medical residents' professionalism. Data was collected from previous research in peer-reviewed articles. The results demonstrated very diverse research topics, with very few studies focusing on the same processes and results within their reflective programs. Although the qualitative data consistently reported that self-reflection provided medical residents some benefit, the quantitative data failed to reliably reflect this result. Nevertheless, common themes within the qualitative data suggest that the reflective exercises were effective in increasing participants' emotional intelligence (EI). As EI and medical professionalism share important qualities and components, future research should be conducted to quantitatively measure the effect of reflective programs on EI.

## Keywords

Behavioral science, medical education, reflective practices, professionalism, emotional intelligence, Balint group, medical retreats, ACGME competencies

## Introduction

The behavioral sciences pose a challenge to the traditional model of medicine. The discipline emerged in the United States during the 1960's as a combination of multiple social sciences (i.e. psychology, sociology, anthropology, etc.) that attempted to document, research, and eventually understand human behavior. The original biomedical model of medicine posits science as the foundation of medical knowledge and practice. The behavioral sciences, on the other hand, propose that health is a biopsychosocial state with multiple layers and systems working within it (Engel, 1981). Thus, in their view, it is the responsibility of capable physicians to transcend the limited clinical view of the biomedical approach and to embrace a more comprehensive understanding of health. Previous research has consistently demonstrated that this reformed approach has contributed to improvements in the doctor-patient relationship, the treatment of somatic patients, doctors' work satisfaction, and the cooperation of the health care team (Polianski & Fangerau, 2012).

After a lengthy debate, contemporary reformers successfully pushed for the inclusion of the behavioral sciences in medical education. In 1999,

the Accreditation Council for Graduate Medical Education (ACGME)'s Residency Review and Institutional Review Committees announced a paradigm shift in residency-based education based on measuring actual success at achieving well-trained and educated, ethical and compassionate physicians (ACGME, 2001). Furthermore, the shift exists as an attempt to move beyond the biomedical approach of medicine into the more inclusive biopsychosocial approach. To achieve this goal, the ACGME committees endorsed 6 general competencies that are now an expected component of residency curricula, evaluation, and planning for all specialties (Figure 1). By putting interpersonal, communication, and professional skills on par with patient care and medical knowledge, the ACGME committees sought to further both quality care and the humanistic mission of the profession.

"The residency program must require its residents to develop the competencies in the 6 areas below to the level expected of a new practitioner."

1. Patient Care
2. Medical Knowledge
3. Practice-based learning and improvement
4. Interpersonal and communication skills
5. Professionalism
6. Systems-based practice

**Figure 1.** Six general competencies endorsed by the ACGME.

In addition to emphasizing evidence-based approaches toward clinical science, the core competencies require residents to effectively create therapeutic relationships with patients, to educate and provide useful information to patients and families, and to work collaboratively in health care teams (ACGME, 2001). The competency approach helps to expand notions of what is required of medical residents in qualitative and behavioral terms. Professionalism, for example, requires that doctors adhere to certain principled responsibilities. The specific attributes that have long been understood to animate professionalism include altruism, respect, honesty, integrity, dutifulness, honor, excellence, and accountability (Cohen, 2006).

While this definition implies that professionalism is a stagnant principle applied uniformly over a medical career, the reality is that professionalism is a dynamic state of mind and is thus susceptible to contextual factors. Professionalism is not simply a set of previously determined qualities or text-based ideals for practice; rather, it is an approach to the practice of medicine that is expressed in observable behaviors (Lesser et al., 2010). This lived approach directly reflects the ACGME's competency based approach to the practice of medicine and ultimately mediates physicians' countless day-to-day interactions while delivering care. More specifically, the competency approach justly re-conceptualizes professionalism as a skill set that can be continually strengthened over time, as opposed to defining professionalism as the absence of a visible breach of conduct. Given that doctors hone their professional attitudes during their formative years as students and residents (Larkin, McKay, & Angelos, 2005), medical educators have a critical role to play in ensuring that future doctors learn the necessary skills to instill the behavioral components of professionalism into their medical practice.

Although the behavioral sciences have been largely incorporated into medical education, limitations and restrictions persist. These limitations exist within the "hidden curricula" of medical education that continues to support the traditional biomedical model of medicine while minimizing the importance of the behavioral sciences in medical education (Hafferty, 1998). In this paper, I argue that the behavioral sciences are instrumental in teaching the practice of professionalism to medical residents through structured and educative reflective programs. In the context of medical education, reflection provides the opportunity for behavioral scientists to create an emotional learning environment for the residents. This environment differs pointedly from the fast-paced and stressful characteristics of traditional residency education and allows the residents the time and the support to identify and process the difficult experiences and emotions they encounter during their practice of medicine. Given opportunities for learners to discover their own strengths and weaknesses, they are more likely to acquire the self-awareness and ability that will ensure their professionalism and success over the long term. It is the goal of this paper to dispel some of the biased notions of medical educators' "hidden curricula" and to demonstrate one of the practical long-term benefits that the behavioral sciences offer to medical residents.

### **Method:**

The reflective exercises implemented within a graduate medical program by behavioral scientists encompass multiple aspects of the medical profession and are an effective learning tool in creating capable and compassionate physicians. In this section, I will focus on two very different reflective programs that incorporate different goals and processes for the residents, yet still contribute significantly to the development of a competency in medical professionalism.

#### *Balint groups*

The first of these reflective programs is the historically psychoanalytical Balint Group. Balint groups are structured group processes that focus on the emotional impact of one patient case on a member of the group (Sternlieb, 2015). The goal of the Balint group is not to discover a solution to the presenter's doctor-patient dilemma but to offer focused feedback that helps the presenter uncover

emotions and move toward constructive self-awareness.

### *Medical Retreats*

The second reflective program is broadly defined as a resident retreat or workshop catered to medical education. Retreats vary greatly in terms of format and procedures. Most often, medical retreats take more time than the other reflective exercises and combine a number of different reflective processes. Common themes include small group discussion, case presentations, role play, physical activity, and arts and crafts. For the purpose of this paper, I will focus on medical retreats that attempt to foster and develop teambuilding, bonding, and communication.

### **Results:**

The data for this paper was collected from previous research in peer-reviewed articles. The data collection was focused on Balint groups and medical retreats. Using 'Balint group' and 'Retreats AND Medical education' as key words, I searched a number of databases including 'ScienceDirect,' 'PubMed,' and 'PsychInfo' for publications up until July 2015. A total of 50 papers were collected. Empirical as well as non-empirical papers were included. References from each article were checked for further peer-reviewed studies.

The Balint group research included very diverse research topics, with very few studies focusing on the same topic. Table 1 and 2 include a summary of the Balint group data (see Appendix). Despite significant methodological shortcomings in some of the research articles (such as small sample sizes, the omission of a control group, and the lack of information on the reliability of the research instrument), evidence of the value of Balint groups in medical education was strongly indicated in some of the qualitative studies. More specifically, the benefits of the Balint group session were clearest in the participants' evaluations, interviews, and personal reports of their Balint group experience.

The medical retreat data also included very diverse research topics and processes. A summary of the medical retreat data is listed in Table 3. The most common findings include a positive rating of the retreat experience, an appreciation of small group discussions, and an empirical improvement in skill or confidence.

### **Discussion:**

Proponents of the traditional biomedical model of medicine have attributed the behavioral sciences' lack of quantitative data as determinant proof that the biopsychosocial approach is not instrumental to the development of excellent physicians. Indeed, previous literature has been persistently inconsistent on measuring and identifying the processes and results involved in reflective exercises. Although qualitative data has reliably reported that self-reflection provides medical residents and doctors some benefit, researchers have failed to reflect this benefit in quantitative terms. However, these inconclusive results should not dismiss the benefits of a 'humanistic' education. The reason the previous studies could not demonstrate statistical evidence for the contributions of their reflective exercises is not because there were none but because they were measuring reflection's indirect effects. The reflective programs mentioned above do not have a direct effect on the empathy, communication, or interpersonal skills of the medical resident. If they did, the research instruments summarized above would have consistently detected a change. Instead, these programs engage the self-awareness of the participants leading to noticeable improvements in their emotional intelligence. More specifically, reflective exercises work to make emotions visible while linking doctors' professional behaviors to attitudes and values through emotional intelligence.

Emotional intelligence (EI) is a term used to describe the verbal and non-verbal appraisal of emotion, regulation of emotion in the self and others, and use of emotional content in problem-solving (Hariharan & Padhy, 2011). The EI skills that are most easily taught and measured, and most directly related to patient and provider outcomes, are those related to emotional awareness, management, and understanding. These include being aware of and managing one's patients' emotions and one's own at the same time. These skills are reflected in many of the qualitative results summarized above. Table 2 and 3 list an "awareness of personal and patients' feelings" along with a "new perspective" as a preceptor for a "maturation of defense mechanisms and professional identity." The first component reflects the EI skill of appraising emotion in the self and others, while the second illustrates the EI ability of emotion regulation and management. Thus, the

literature review presented above strongly suggests that reflective exercises have a direct effect on EI. Furthermore, the data above demonstrates a common theme of quantitative results over the long-term but not the short-term (Table 1). This suggests improvements in EI may cause an indirect improvement of other essential qualities.

For example, EI may be an important component of medical professionalism. For instance, admitting that an error has been made and being open about it to a patient or a patient's family involves significant management of one's own feelings, as well as of the emotional response of the patient and their family, and one's colleagues. Since medical professionalism is a dynamic trait, EI may contribute the practical knowledge necessary to adapt to a number of different contexts and situations. Empathy may also be an inherent facet of EI. Accurately reading and managing emotions is a crucial process in being aware of the feelings of others. In addition, empathy underlines several of the ACGME competencies. Being compassionate underpins good Patient Care, Professionalism, and Interpersonal and Communication Skills. EI may be related to a number of other important qualities and thus must be considered a central component of medical education. Future studies should attempt to quantitatively measure the effect of reflective exercises on doctor's EI to better establish this relationship.

### Conclusions:

Although previous research has failed to obtain quantitative data to support the inclusion of reflective programs in medical education, the behavioral sciences remain instrumental to the medical professional. The pervasive link between EI, medical professionalism, and doctor competence carries significant implications for medical training. An immediate implication may be to educate doctor in EI-related skills to better achieve their required professional competencies (e.g. professionalism), which echoes calls in the literature for training in the psychosocial aspects of care. Moreover, the EI components may provide an evidence-based classification of the type of non-technical skills provided by behavioral science that medical training has traditionally found hard to address and incorporate into the standard curriculum. Future research concerning the benefits and limitations of EI-centered curricula in medical education must be

implemented before any serious conclusions can be drawn.

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the intensive care unit. *Journal of Palliative Medicine*, 16(5), 531-536.

## Appendix

Table 1

### *Balint Group Quantitative Data*

Article	Participants	Instruments	Topics/Variables	Results
(Abeni et al. 2013)	30 (8 Caregivers + 10 physicians + 12 nurses)	REM-71 + SAT – P + GCQ	Defense mechanisms, satisfaction, process	Maturation of defenses, no effect on satisfaction, improved group climate & - conflict
(Adams et al. 2006)	7 residents (+ 6 control)	PMI + Musick 360 degree eval.	Psychological medicine skills; professionalism	No effect on psychosocial efficacy or professionalism
(Amiel et al. 2006)	17 GPs (+ 17 control)	OSCE	Breaking bad news (BBN)	No effect on BBN
(Cataldo et al. 2005)	74 GPs (+ 40 control)	JPSE + Work Satisfaction Survey	Empathy, work satisfaction	No change in empathy or work satisfaction
(Ghetti et al. 2009)	17 Residents	MBI + PMI + JSPE	Burnout, mental health skills, empathy	No effect on burnout, psychosocial self-efficacy, empathy
(Kjeldmand et al. 2004)	20 GPs (+ 21 control)	Questionnaire (own design)	Workload, control, satisfaction, quality of life, cooperation, training, health, attitudes to psychosomatic patients	Experienced BG participants had overall higher scores (except for “workload”)
(Rabinowitz et al. 1994)	13 Nurses	PMI + part. listing important mental health topics	Mental health skills, burnout, psychosocial repertoire	Increase in psychosocial efficacy and decreased burnout (for long-term part.); no effect on psychosocial repertoire

Table 2

### *Balint Group Qualitative Data*

(Sekeres et al. 2003)	28 Medical Fellows	Attitudes + evaluation questionnaire	Attitudes, evaluation of BG	No effect on attitudes (only in “view of oneself as a physician”); BG considered safe group, decompress, social activity
(Turner and Malm, 2004)	6 Residents (+8 control)	PMI	Psychological medicine skills	Increase in psychosocial self-efficacy
Article	Data + Participants	Topics	Findings	
(Dahlgren et al. 2005)	Semi-structured interviews with 3 BG part. (physiotherapists)	Process; effects	8 process elements grouped into 4 phases (e.g. expression of difficulties, meeting other perspectives, applying insight)	
(Graham et al. 2009)	Semi-structured interviews with 17 BG part. (psychiatrists)	Process; effects	<b>Process:</b> Self-reflection; <b>effects:</b> awareness of own and patients’ feelings, new perspective &	

(Kjelfmand & Holmstrom, 2010)	Semi-structure interviews with 9 BG part. (GPs)	Process; effects	understanding <b>Process:</b> sense of security, endurance, & satisfaction <b>Effects:</b> competence in d-p encounter, different aspects of professional identity
(Samuel, 1989)	Tape records; leader's notes; group attitude questionnaire by 11 BG part.	Themes; process; effects	<b>Theme:</b> personal themes; <b>process:</b> identification with cases, use of group for immediate help; <b>effect:</b> maturation of defenses, some positive change in attitudes towards patients
(Salander & Sandstrom, 2014)	Observation of 63 resident BG meetings (field notes)	Themes	3 categories: communication challenges (cc) in d-p relationship, cc in an organizational context, cc in relation to patients' family
(Torppa et al. 2008)	Leaders notes on 2 BGs (medical students)	Themes	Feelings related to patients, building professional identity, negative role models, cooperation with other professionals
(Van Roy et al. 2014)	Observation notes	Process	Characterizations of change in part.

Table 3

*Medical Retreat Data*

Article	Participants	Topic + Variables	Process	Results
(Alexander et al., 2006)	56 Residents (retreat $n = 37$ ; control $n = 19$ )	Pain & symptom management, communication skills, self-awareness,	Small group teaching with lecture, discussion, & role-play. "Trigger tapes"	Increases in skill rating of BBN, information giving, & responding to emotional cues. No change in communication skills
(Back et al., 2007)	"Leading residents" + senior clinical faculty	Developing a cooperative relationship, BBN, discussing palliative care & DNR	Small group discussion, skill practice sessions. Cognitive road maps BBN. Role play	Significant improvement in BBN and transition skills.
(Fryer-Edwards et al. 2006)	Oncology fellows	Evaluation of small group teaching of communication skills	Small group discussion; Role play; Evaluation + Feedback	Improvement of communication skills + approval of small-group teaching
(Stoller et al., 2004)	1 <sup>st</sup> -year residents	Teambuilding + leadership	Teambuilding survival exercise + Pictionary + team based discussion of leadership + small group discussion	Redefined leadership role
(Szmulowicz et al., 2010)	49 PGY-2 residents	Communication skills (End-of-life) + responding to emotions	Teaching modalities + role play	Improved ability to BBN and respond to emotions. Increased confidence in EOL conversations
(Yuen et al., 2013)	29 interns	ICU communication skills	Small group discussion + Role-Play + large group debriefing	Improved BBN, d-p communication. Learned importance of expressing empathy & understanding